

# COMPREHENSIVE MARKET ANALYSIS REPORTS



Policy Development & Research

## Analysis of the Knoxville, Tennessee

### Housing Market As of April 1, 2005



ECONOMIC RESEARCH

U.S. Department of Housing and Urban Development

## **Foreword**

This analysis has been prepared for the assistance and guidance of the U.S. Department of Housing and Urban Development (HUD) in its operations. The factual information, findings, and conclusions may also be useful to builders, mortgagees, and others concerned with local housing market conditions and trends. The analysis does not purport to make determinations regarding the acceptability of any mortgage insurance proposals that may be under consideration by the Department.

The factual framework for this analysis follows the guidelines and methods developed by HUD's Economic and Market Analysis Division. The analysis and findings are as thorough and current as possible based on information available on the "as-of" date from local and national sources. As such, findings or conclusions may be modified by subsequent developments. HUD wishes to express its appreciation to those industry sources and state and local government officials who provided data and information on local economic and housing market conditions.

This analysis takes into consideration changes in the economic, demographic, and housing inventory characteristics of the market area during three periods: from 1990 to 2000, from 2000 to the as-of date of the analysis—April 1, 2005 (Current date)—and from the Current date to a Forecast date—April 1, 2008. In the analysis, 1990 and 2000 refer to the dates of the decennial census—April 1 unless specified otherwise. This analysis presents counts and estimates of employment, population, households, and housing inventory as of the 1990 Census, 2000 Census, Current date, and Forecast date. For purposes of this analysis, the forecast period is 36 months.

The prospective demand expressed in the analysis should not be construed as a forecast of building activity; rather, it presents the prospective housing production that would maintain a reasonable balance in the demand-supply relationship given the market conditions on the as-of date of the analysis. This analysis was prepared by Erin Reed, the Division's field economist in HUD's Atlanta Regional Office, based on fieldwork conducted in March 2005. Questions regarding the findings and conclusions of the analysis may be addressed to Ms. Reed at 404-331-6623, ext. 2659, and at [erin\\_k\\_reed@hud.gov](mailto:erin_k_reed@hud.gov).

## **Housing Market Area**

The Knoxville, Tennessee Housing Market Area (HMA) is located in the Southern Appalachian region and is defined as Anderson, Blount, and Knox Counties. The HMA is part of the Knoxville Metropolitan Statistical Area (MSA), which includes two additional counties—Loudon and Union Counties.

Please note that the discussion on nonfarm employment and household income pertains to the five-county Knoxville MSA.

Knoxville, located in Knox County, is the largest city in the HMA and is home to the University of Tennessee (UT). The Oak Ridge National Laboratory (ORNL) is located in Anderson County, approximately 20 miles from Knoxville. Maryville is the county seat of Blount County, which is located approximately 16 miles from Knoxville.

## **Summary**

During the 1990s, the Knoxville sales and rental markets softened as more units were added to the housing inventory than area population and household growth could support. From 2000 to the Current date, population growth caught up with the pace of residential construction and sales and rental market conditions improved. Currently, the sales market is relatively balanced and the rental market, despite improvements in recent years, remains soft.

A broad employment base in government, education, and health care—sectors not easily influenced by cyclical changes—has enabled the HMA to avoid recession and encouraged steady growth. Total resident employment in the HMA grew at an average rate of 4,540 a year during the 1990s and has since grown by 4,075 a year. Total nonfarm employment in the five-county Knoxville MSA has slowed from 2000 to the Current date. Historically, the unemployment rate in the HMA has remained at a low level. The current average unemployment rate for the past 12 months is 3.4 percent.

During the 1990s, population in the HMA grew at an average annual rate of 6,922. The average annual change of population increased to 7,275 from 2000 to the Current date. Annual population growth during the forecast period is expected to increase slightly.

Population and household growth are expected to follow employment growth, causing increased housing demand during the forecast period. Resident employment should continue to grow at a pace equal to that from 2000 to the Current date. As population continues to increase and the labor force grows, the unemployment rate is projected to increase slightly to 3.7 percent. The population growth is estimated to result in 12,900 new households in the HMA by the Forecast date. Demand for new housing for the period from April 1, 2005, to April 1, 2008, is estimated to total 13,100 units — 10,400 sales units and 2,700 rental units.

## **Economy of the Area**

The leading employer in the HMA is the U.S. Department of Energy (DOE) with approximately 13,000 employees. The DOE operates the ORNL, which was built for the Manhattan Project during World War II and is still used as a research and development facility. Another principal employer is UT with 9,300 employees. One of the area's largest employers, the Tennessee Valley Authority, has recently eliminated around 200 jobs and 300 contractor positions, most of which were professional and management positions. The Exedy Corporation of Japan, a manufacturer of car parts, recently announced that it will add 200 full-time positions by June 2006.

Since 2000, resident employment increased at a rate of 4,075 jobs a year and currently totals 302,144. The trends for labor force, total employment, and unemployment from 1990 to the Current date are presented in Table 1. A large portion of nonfarm employment in the five-county Knoxville MSA is in the sectors of trade, government, manufacturing, professional and business services, education and health services, and manufacturing. During the 1990s, all employment sectors, except for federal and state government, realized significant job growth. Total nonfarm employment in the five-county Knoxville MSA grew by an average annual rate of 6,000 jobs through the 1990s. Although nonfarm employment continued to increase from 2000 to the Current date, it slowed to an average growth of 4,150 jobs a year. Currently nonfarm employment in the five-county Knoxville MSA is 323,700. The MSA avoided manufacturing sector declines that affected the state during the 1990s; however, it has had a 12-percent decline in manufacturing since 2000. The MSA's recent decline in manufacturing employment can be attributed to an overall decline in manufacturing throughout the country due to foreign outsourcing. The trends in nonfarm employment from 1990 to the Current date are presented in Table 2.

Resident employment in the HMA is expected to increase modestly through the forecast period due primarily to growth in three sectors—government, education, and health care. During the 3-year forecast period, growth in nonfarm employment is expected to increase by an average 5,100 jobs a year, and the annual growth for total resident employment is expected to increase to an average 4,600 jobs a year. By the Forecast date it is estimated that nonfarm employment for the five-county Knoxville MSA will be 339,000, and resident employment for the HMA will be 316,000.

## **Household Incomes**

Median family income in the five-county Knoxville MSA increased at an average rate of 5.2 percent a year during the 1990s. In 1999, the median family income was \$45,697 and rose at an average annual rate of 3.1 percent a year as of the Current date. The current HUD-determined median family income for the MSA is \$52,750.

## **Population**

From 1990 to 2000, net in-migration to the HMA averaged 5,200 people annually; from 2000 to the Current date, in-migration rose to an average 5,900 people a year. The 2000

Census reported a population of 559,185. From 2000 to the Current date, the total population increased by an average annual 7,275 to an estimated 595,500.

Because resident employment growth is expected to increase during the 3-year forecast period at a rate similar to that of the early 2000s, population growth is expected to also increase at a relatively stable rate. Average population growth of 7,475 a year is estimated during the forecast period, and by April 2008 the HMA population should reach 617,900. Population trends for the HMA are presented in Table 3.

## **Households**

During the 1990s, growth in the number of households averaged 3,575 a year. The number of renter households grew by an average annual increase of 600 during the 1990s compared to an average annual increase of 900 from 2000 to the Current date. From 2000 to the Current date, the total average annual household growth was 3,925. Average annual household growth is expected to continue increasing by 4,300 through the forecast period and total 262,800 as of April 1, 2008.

Since 1990, average household size in the HMA has been decreasing steadily. This decrease can be attributed to a growing number of students and retirees and to an overall demographic shift toward smaller families. Household trends for the HMA are presented in Table 3.

### ***University Student Housing***

The UT campus is located in the downtown area of Knoxville and, therefore, has a significant impact on the downtown housing market. On-campus housing has an approximate capacity of 7,250 students in 13 residence halls. As of March 2005, the occupancy rate on campus was 89 percent, down from a 95-percent occupancy rate at the beginning of the fall 2004 semester due to a typical midyear decline in enrollment.

After UT students have met the freshman year requirement of living on campus, most prefer to live off campus in nearby rental complexes. Students living in off-campus housing make up approximately 72 percent of the student population. Off campus, the university supports four apartment complexes with 1,370 units and a current occupancy of approximately 70 percent. University-owned apartments report lower occupancy rates due to the general lack of amenities, which are offered in newer complexes. Private apartment complexes near campus, which mainly serve students, report occupancy rates over 90 percent. An estimated 6,800 UT student households reside in the Knoxville HMA.

## **Housing Inventory**

From 1990 to 2000, the total housing inventory increased by an average of 4,150 units a year. Although employment and population growth increased from 2000 to the Current date, average annual growth of housing decreased slightly to 4,000 units as builders adjusted to the soft market. The current housing inventory is estimated at 271,000 units. Despite the growing number of rental units in the HMA, there continues to be a tenure

shift toward homeownership. In 1990, 66.7 percent of the housing inventory were owner-occupied units and, as of the Current date, this share has increased to 69.9 percent. This trend is expected to continue through the forecast period. Trends from 1990 to 2000 and from 2000 to the Current date on housing inventory, tenure, and vacancy are presented in Table 4.

During the 1990s, an average 3,525 units were permitted annually, a rate that has since increased to 3,700 from 2000 to the Current date. Approximately 85 percent of the units permitted from 2000 to the Current date were single-family homes. While single-family home permits have increased at a relatively constant pace in the last few years, the number of permits for multifamily units has varied considerably from year to year. As of April 1, 2005, 2,000 single-family units and 700 multifamily units are under construction in the HMA. Annual permit activity from 1990 to the Current date is presented in Table 5.

North Knoxville has recently had major growth in new construction of single-family homes. Increased residential construction is also occurring in West Knoxville, where growth is continuing out toward Pellissippi Parkway leading into Oak Ridge in Anderson County. The housing inventory is growing downtown with conversions and new construction of both rental and sales units. Although downtown Knoxville had a 12-percent population decrease during the 1990s, recent efforts to revive the downtown area have resulted in a population increase during the past 4 years. It is now common for downtown apartments and condominiums to report long waiting lists.

Approximately 22,375 units, or 8.3 percent of the total housing inventory of the HMA, are manufactured homes, and more than half of those are owner-occupied units. A large portion of this type of housing exists outside the central city of Knoxville.

In 2000, the Knoxville HMA sales market was relatively balanced, with an overall vacancy rate of 2.3 percent, while the rental market was soft, with an overall vacancy rate of 10.4 percent. From 2000 to the Current date, growth of the housing inventory did not keep pace with household formation, resulting in a tightening of sales and rental markets to vacancy rates of 2.0 and 8.5 percent, respectively.

## **Sales Market Conditions**

Since the 1990s, the sales market has remained in balance with a vacancy rate of 2.0 percent. The Knoxville Association of REALTORS® reported a 16.9-percent increase in the total number of single-family homes sold in the past 12 months, when compared with the previous 12-month period. The average price of a three-bedroom detached house increased 8 percent from \$134,600 to \$145,200 in the past 12 months, while the average price of a condominium increased 8 percent from \$122,600 to \$132,500.

## **Rental Market Conditions**

The rental vacancy rate in Knoxville increased from 8.5 percent in 1990 to 10.4 percent in 2000 as rental production exceeded renter household growth. Since 2000, the number

of renter households has grown at a faster pace while the rate of construction for rental housing has slowed. The rental market has improved and the current rental vacancy rate is 8.5 percent. The rental market is still soft but is moving toward a more balanced state than in 2000.

## **Forecast Housing Demand**

During the 3-year forecast period, an estimated 12,900 new households will form. After accounting for tenure shift, losses to the inventory, and current excess vacancy, the number of new units required to meet anticipated demand during the forecast period is 13,100. Estimated demand is for 10,800 when accounting for those units currently under construction.

To meet the demand for sales housing, a supply of 10,400 new sales units will be required. Most of the sales demand during the forecast period will be for single-family detached homes. A distribution of demand for new market-rate sales units by price range for the forecast period is presented in Table 6.

The number of new rental units required during the forecast period to maintain an optimal demand-supply relationship is 2,700 units. New additions required to achieve a balanced market during the 3-year forecast period will increase each year as the market absorbs excess vacancies and units currently under construction. A distribution of demand by rent range and number of bedrooms for the forecast period is presented in Table 7.

**Table 1**  
**Labor Force and Employment**  
**Knoxville HMA**  
**1990 to March 31, 2005**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Labor Force	247,220	252,740	262,360	268,260	278,060	281,190	281,570	276,660	284,180	288,100
Employment	236,370	240,520	249,600	256,570	267,790	270,460	270,940	265,580	275,120	279,740
Unemployment	10,850	12,220	12,760	11,690	10,270	10,730	10,630	11,080	9,060	8,360
Rate (%)	4.4	4.8	4.9	4.4	3.7	3.8	3.8	4.0	3.2	2.9

  

	2000	2001	2002	2003	2004	Previous 12 Mos. <sup>a</sup>	Current 12 Mos. <sup>b</sup>
Labor Force	289,320	295,690	307,770	307,200	313,071	308,467	312,803
Employment	281,770	286,910	298,240	296,540	303,951	298,119	302,144
Unemployment	7,550	8,780	9,530	10,660	9,120	10,348	10,659
Rate (%)	2.6	3.0	3.1	3.5	2.9	3.4	3.4

<sup>a</sup> 12-month average April 1, 2003–March 31, 2004.

<sup>b</sup> 12-month average April 1, 2004–March 31, 2005.

Source: Tennessee Department of Labor and Workforce Development



**Table 2**  
**Nonfarm Employment by Industry**  
**Five-county Knoxville MSA**  
**1990 to March 31, 2005 (1 of 2)**

Employment Sector	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Total Nonfarm	242.8	247.5	258.0	267.7	273.7	283.2	284.6	286.3	290.5	296.0
Goods-Producing	53.5	52.5	54.4	56.0	56.8	59.6	59.1	59.1	59.3	59.5
Const. & Mining	10.8	10.1	11.2	11.9	12.7	15.5	15.7	15.1	15.4	15.3
Manufacturing	42.7	42.4	43.2	44.1	44.2	44.0	43.4	44.1	43.9	44.2
Durable Goods	29.9	29.3	29.7	30.0	29.9	29.6	29.4	30.1	30.1	30.8
Nondurable Goods	12.9	13.1	13.5	14.2	14.3	14.4	14.0	14.0	13.8	13.3
Service-Providing	189.3	195.0	203.6	211.7	216.9	223.6	225.5	227.1	231.2	236.6
Trade	45.9	45.2	45.4	45.4	47.2	49.3	50.0	50.4	51.3	52.3
Wholesale Trade	12.9	12.5	12.2	11.9	12.1	12.4	12.4	12.5	13.0	13.2
Retail Trade	33.0	32.7	33.2	33.5	35.1	36.9	37.6	37.9	38.3	39.1
Transport. & Utilities	7.3	7.2	7.2	7.6	8.3	8.6	8.8	9.2	9.5	9.7
Information	5.4	5.2	5.4	5.5	5.5	5.4	5.3	5.4	5.7	5.8
Financial Activities	10.8	11.1	11.6	12.1	12.7	13.2	13.6	13.9	14.4	14.1
Prof. & Bus. Svcs.	22.0	24.0	26.4	28.3	29.8	31.6	31.6	30.8	31.0	33.7
Edu. & Health Svcs.	21.8	23.0	24.9	26.7	26.7	28.0	28.8	29.9	30.9	30.6
Leisure & Hospitality	19.2	20.6	21.9	23.2	24.2	24.5	24.6	24.6	25.1	26.5
Government	48.6	49.2	50.1	51.8	51.8	52.2	51.9	51.2	51.3	51.4
Federal	6.2	5.9	6.3	6.3	6.1	5.9	6.0	5.9	5.6	5.4
State	21.7	22.1	21.9	22.6	21.9	21.8	21.0	20.5	19.9	19.9
Local	20.7	21.2	21.9	22.9	23.7	24.5	24.9	24.8	25.8	26.0

Notes: Figures are in thousands.

Numbers may not add to totals due to rounding.

Source: U.S. Department of Labor, Bureau of Labor Statistics—North American Industry Classification System (NAICS)

**Table 2**  
**Nonfarm Employment by Industry**  
**Five-county Knoxville MSA**  
**1990 to March 31, 2005 (2 of 2)**

Employment Sector	2000	2001	2002	2003	2004	Previous 12 Mos.	Current 12 Mos.
Total Nonfarm	302.9	307.7	314.5	317.0	322.3	318.0	323.7
Goods-Producing	59.5	56.9	55.9	55.4	55.4	55.1	55.5
Const. & Mining	15.5	15.1	15.1	15.7	16.5	15.9	16.7
Manufacturing	44.0	41.8	40.8	39.7	38.8	39.3	38.8
Durable Goods	31.1	29.7	29.1	29.0	28.4	28.7	28.2
Nondurable Goods	12.9	12.1	11.7	10.7	10.5	10.5	10.5
Service-Providing	243.3	250.9	258.6	261.6	267.0	262.9	268.3
Trade	53.9	54.7	55.5	56.2	58.1	56.6	58.6
Wholesale Trade	13.7	14.0	14.5	15.2	16.1	15.3	16.3
Retail Trade	40.2	40.7	41.0	41.0	42.0	41.3	42.3
Transport. & Utilities	9.8	10.4	10.5	10.3	10.4	10.3	10.4
Information	6.0	5.7	5.9	6.0	6.2	6.1	6.2
Financial Activities	14.0	14.2	14.9	16.2	16.6	16.4	16.7
Prof. & Bus. Svcs.	36.8	37.7	38.2	38.4	38.7	38.4	38.9
Edu. & Health Svcs.	31.7	33.2	35.2	36.6	37.6	36.9	37.8
Leisure & Hospitality	27.7	30.3	31.3	31.4	33.0	31.6	33.5
Government	51.7	52.3	54.2	52.8	52.4	52.8	52.3
Federal	5.5	5.4	5.4	5.3	5.2	5.3	5.2
State	19.6	19.8	20.6	19.7	18.8	19.3	18.7
Local	26.6	27.2	28.2	27.9	28.5	28.3	28.4

Notes: Figures are in thousands.  
 Numbers may not add to totals due to rounding.  
 Source: U.S. Department of Labor, Bureau of Labor Statistics—NAICS

**Table 3**  
**Population and Household Trends**  
**Knoxville HMA**  
**April 1, 1990 to April 1, 2008**

	April 1, 1990	April 1, 2000	Current Date	Forecast Date	Average Annual Change					
					1990 to 2000		2000 to Current		Current to Forecast	
					Number	Rate (%)	Number	Rate (%)	Number	Rate (%)
<b>Population</b>										
Knoxville HMA	489,961	559,185	595,500	617,900	6,922	1.4	7,275	1.3	7,475	1.3
<b>Households</b>										
Knoxville HMA	194,647	230,319	249,900	262,800	3,567	1.8	3,925	1.7	4,300	1.7

Notes: Rate of change is calculated on a compound basis.  
Average annual changes rounded for comparison.  
Sources: 1990 and 2000—U.S. Census Bureau  
Current and Forecast—Estimates by analyst

**Table 4**  
**Housing Inventory, Tenure, and Vacancy**  
**Knoxville HMA**  
**1990, 2000, and April 1, 2005**

	Knoxville HMA		
	1990	2000	Current
<b>Total Housing Inventory</b>	209,437	250,949	271,000
Occupied Units	194,647	230,319	249,900
Owners	129,842	159,535	174,700
%	66.7	69.3	69.9
Renters	64,805	70,784	75,200
%	33.3	30.7	30.1
Vacant Units	14,790	20,630	21,100
For Sale	2,409	3,811	3,600
Rate (%)	1.8	2.3	2.0
For Rent	6,005	8,189	7,000
Rate (%)	8.5	10.4	8.5
Other Vacant	6,376	8,630	10,500

Sources: 1990 and 2000—U.S. Census Bureau  
 Current and Forecast—Estimates by analyst

**Table 5**  
**Residential Building Permit Activity**  
**Knoxville HMA**  
**1990 to March 31, 2005 (1 of 2)**

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Knoxville HMA</b>										
Total	2,936	2,778	3,369	3,809	3,782	3,792	4,609	3,751	3,249	3,295
Single-family	2,572	2,556	3,180	3,308	3,429	3,080	3,452	2,724	2,628	2,694
Multifamily	364	222	189	501	353	712	1,157	1,027	621	601

Note: Multifamily permits include all structures with two or more units.

Sources: U.S. Census Bureau, Building Permits Survey

2001–05: Residential Building Permit Trend Report produced by The Market Edge

**Table 5**  
**Residential Building Permit Activity**  
**Knoxville HMA**  
**1990 to March 31, 2005 (2 of 2)**

	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>Current 12 Mos.</b>
<b>Knoxville HMA</b>							
Total	3,215	2,929	3,695	3,975	4,389	1,157	4,449
Single-family	2,648	2,416	2,908	3,812	3,498	1,133	3,757
Multifamily	567	513	787	163	891	24	692

Note: Multifamily permits include all structures with two or more units.

Sources: U.S. Census Bureau, Building Permits Survey

2001–05: Residential Building Permit Trend Report produced by The Market Edge

**Table 6**  
**Estimated Qualitative Demand for New Market-Rate Sales Housing**  
**Knoxville HMA**  
**April 1, 2005 through April 1, 2008**

Price Range (\$)		Units of Demand
From	To	
100,000	125,000	1,550
125,000	150,000	1,575
150,000	175,000	1,975
175,000	200,000	1,450
200,000	250,000	1,350
250,000	300,000	1,250
300,000	400,000	830
400,000	500,000	220
	500,000 and higher	200

Source: Estimates by analyst

**Table 7**  
**Estimated Qualitative Demand for New Market-Rate Rental Housing**  
**Knoxville HMA**  
**April 1, 2005 to April 1, 2008**

One Bedroom		Two Bedrooms		Three Bedrooms	
Monthly Gross Rent (\$)	Units of Demand	Monthly Gross Rent (\$)	Units of Demand	Monthly Gross Rent (\$)	Units of Demand
500	850	600	1,150	750	700
550	720	650	950	800	570
600	660	700	850	850	520
650	580	750	720	900	470
700	490	800	600	950	410
750	400	850	480	1,000	360
800	310	900	380	1,050	310
900	240	1,000	300	1,150	270
1,000	180	1,100	230	1,250	230
1,100	140	1,200	180	1,350	140
1,200	100	1,300	140	1,450	70
1,300	75	1,400	30	1,550	60
1,400 and higher	55	1,500 and higher	10	1,650 and higher	50

Notes: Distribution above is noncumulative.  
Demand shown at any rent represents demand at that level and higher.

Source: Estimates by analyst